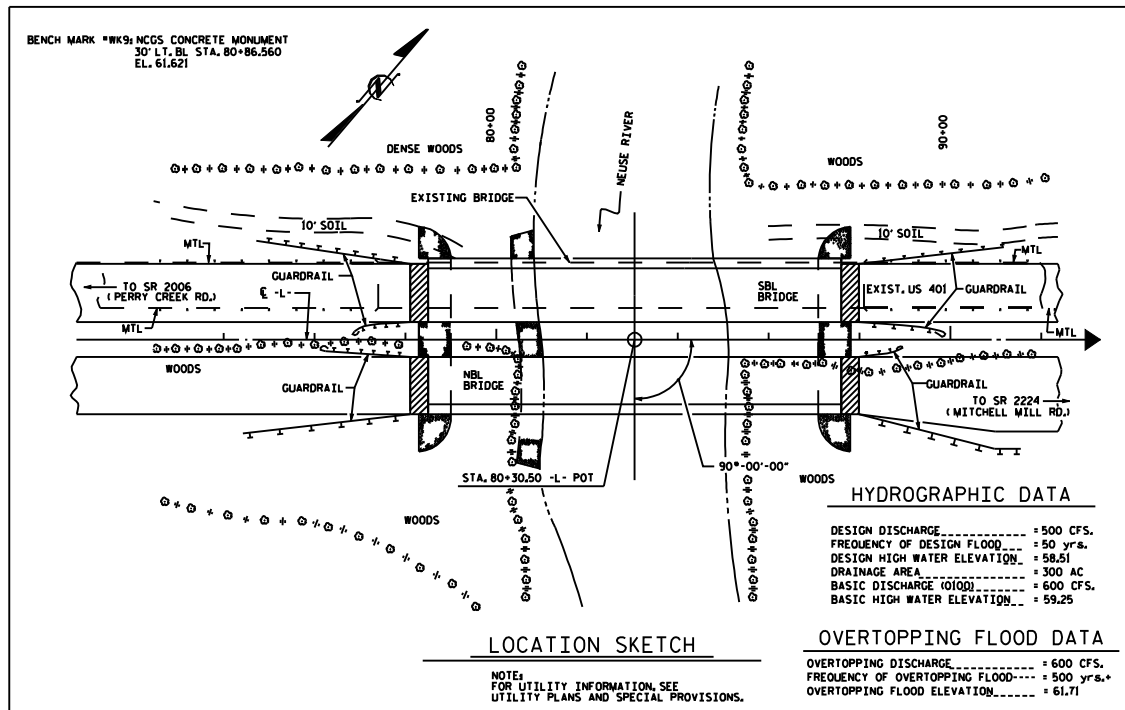


FIGURE 5 - 5



**NOTES:** (CONTINUED FROM SHEET 2 OF 3 )

FOR DRILLED PIERS, SEE DRILLED PIERS SPECIAL PROVISION.

DRILLED PIERS AT BENTS NO. 1, NO. 2, AND NO. 3 ARE DESIGNED FOR END BEARING ONLY. CHECK FIELD CONDITIONS FOR THE REQUIRED END BEARING CAPACITY OF 18 TONS/FT<sup>2</sup>.

DRILLED PIERS AT BENT NO. 1 SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 146.00' AND SATISFY THE REQUIRED END BEARING CAPACITY. DRILLED PIERS AT BENTS NO. 2 AND NO. 3 SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 141.00' AND SATISFY THE REQUIRED END BEARING CAPACITY.

THE SCOUR CRITICAL ELEVATION FOR BENTS NO. 1, NO. 2, AND NO. 3 IS ELEVATION 159.12'. SCOUR CRITICAL ELEVATIONS ARE USED TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

PERMANENT STEEL CASING IS REQUIRED FOR DRILLED PIERS AT BENTS NO. 1 AND NO. 2 DO NOT EXTEND THE CASING BELOW ELEVATIONS 165.65' AND 164.04' RESPECTIVELY WITHOUT PRIOR APPROVAL FROM THE ENGINEER. SEE DRILLED PIERS SPECIAL PROVISIONS.

PERMANENT STEEL CASING IS NOT REQUIRED FOR DRILLED PIERS AT BENT NO. 3.

SPT TESTING IS NOT REQUIRED TO DETERMINE THE END BEARING CAPACITY OF THE DRILLED PIERS AT BENTS NO. 1, NO. 2, OR NO. 3. SEE DRILLED PIERS SPECIAL PROVISION.

DO NOT USE SLURRY CONSTRUCTION FOR DRILLED PIERS ON THIS PROJECT.

SID INSPECTIONS MAY BE REQUIRED TO INSPECT THE BOTTOM CLEANLINESS OF THE DRILLED PIERS.

THE ENGINEER WILL DETERMINE THE NEED FOR THE SID INSPECTIONS. SEE DRILLED PIERS SPECIAL PROVISION.

THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH HEC 18, 'EVALUATING SCOUR AT BRIDGES', MAY, 2001.

FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.

THE CONTRACTOR SHALL PROVIDE INDEPENDENT ASSURANCE SAMPLES OF REINFORCING STEEL AS FOLLOWS: FOR PROJECTS REQUIRING UP TO 400 TONS OF REINFORCING STEEL ONE THIRTY INCH SAMPLE OF EACH SIZE BAR USED, AND FOR PROJECTS REQUIRING OVER 400 TONS OF REINFORCING STEEL TWO THIRTY INCH SAMPLES OF EACH SIZE BAR USED, THE BARS FROM WHICH THE SAMPLES ARE TAKEN MUST THEN BE SPLICED WITH REPLACEMENT BARS OF THE SIZE AND LENGTH OF THE SAMPLE PLUS A MINIMUM LAP SPLICE OF THIRTY BAR DIAMETERS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

THE EXISTING STRUCTURE LOCATED AT THE SITE OF THE PROPOSED SOUTH BOUND LANE BRIDGE SHALL BE REMOVED. THE EXISTING STRUCTURE CONSISTS OF:

SUPERSTRUCTURE 1  
REINFORCED CONCRETE DECK ON 5 REINFORCED CONCRETE GIRDERS WITH A CLEAR ROADWAY WIDTH OF 25.81' AND 7 SPANS AT 50.00' EACH.

SUBSTRUCTURE 1  
REINFORCED CONCRETE POST AND BEAM END BENTS AND REINFORCED CONCRETE POST AND WEB PIER INTERIOR BENTS.

**TOTAL BILL OF MATERIAL**

TOTAL BILL OF MATERIAL																								
	REMOVAL OF EXISTING STRUCTURE	4'-6" Ø DRILLED PIERS NOT IN SOIL	4'-6" Ø DRILLED PIERS IN SOIL	PERMANENT STEEL CASING FOR 4'-6" Ø DRILLED PIERS	UNCLASSIFIED STRUCTURE EXCAVATION	REINFORCED CONCRETE DECK SLAB	GROOVING BRIDGE FLOORS	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL	SPIRAL COLUMN REINFORCING STEEL	45" PRESTRESSED CONCRETE GIRDERS	54" PRESTRESSED CONCRETE GIRDERS	HP 12 x 53 STEEL PILES	CONCRETE BARRIER RAIL	RIP RAP CLASS II (2'-0" THICK)	FILTER FABRIC FOR DRAINAGE	ELASTOMERIC BEARINGS	EVAZOTE JOINT SEALS	ELECTRICAL CONDUIT SYSTEM	TEMPORARY ROCK CAUSEWAY			
	LUMP SUM	LIN. FT.	LIN. FT.	LIN. FT.	LUMP SUM	SO. FT.	SO. FT.	CU. YDS.	LUMP SUM	LBS.	LBS.	No.	LIN. FT.	No.	LIN. FT.	No.	LIN. FT.	TONS	SO. YDS.	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	
SUPERSTRUCTURE	LUMP SUM				LUMP SUM	13978.0	10746.7		LUMP SUM			10	563.48	10	908.30		296.47		LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM		
END BENT 1								36.8		5743				13	319.88			197	210					
BENT 1		85.3	11.2	37.4				48.9		16726	4323							252	269					
BENT 2		100.4	10.8	42.3				52.0		18142	4770													
BENT 3		118.0	10.8					37.8		17683	4967													
END BENT 2								33.6		5304				10	475.7		258	276						
TOTAL	LUMP SUM	303.7	32.8	79.7	LUMP SUM	13978.0	10746.7	209.1	LUMP SUM	63598	14060	10	563.48	10	908.30	23	795.58	296.47	980	755	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM

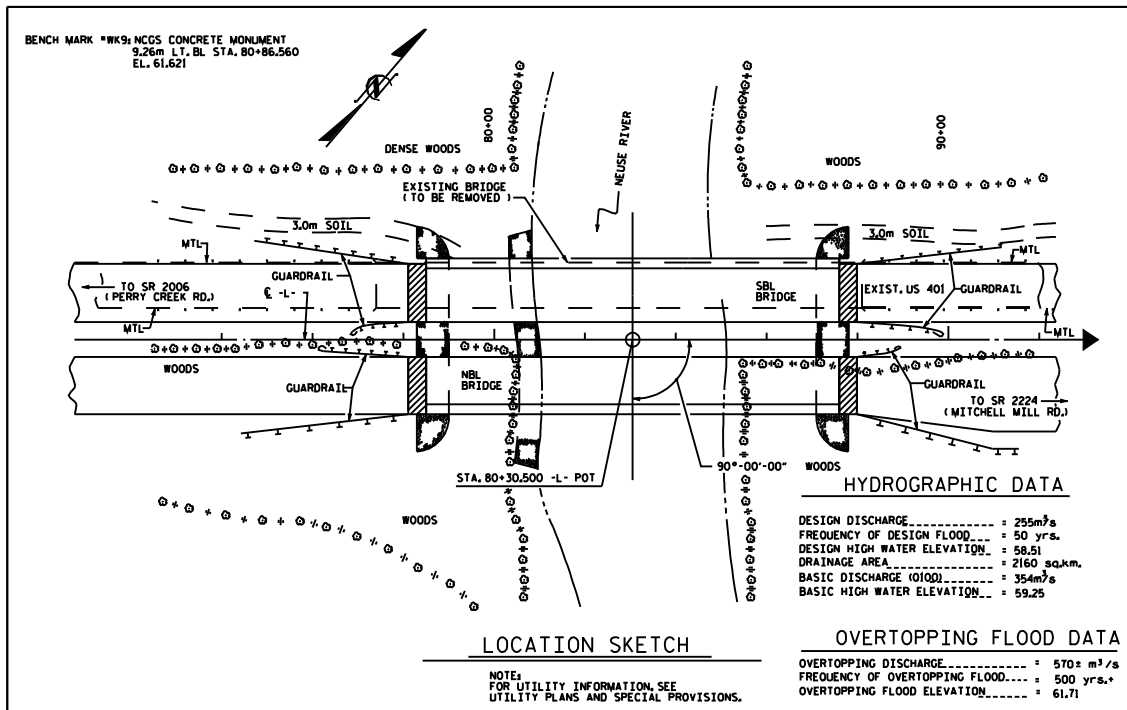
DRAWN BY : \_\_\_\_\_ DATE : \_\_\_\_\_  
CHECKED BY : \_\_\_\_\_ DATE : \_\_\_\_\_

PROJECT No. EXAMPLE  
COUNTY \_\_\_\_\_  
STATION: \_\_\_\_\_  
SHEET 3 OF 3

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
HAZARD  
GENERAL DRAWING  
(SBL)  
BRIDGE OVER NEUSE RIVER  
ON US-401 BETWEEN  
SR 2006 AND SR 2224

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			3			
2			4			

FIGURE 5 - 5 M



# NOTES: (CONTINUED FROM SHEET 2 OF 3)

FOR DRILLED PIERS, SEE SPECIAL PROVISIONS.

THE DRILLED PIERS AT BENT NO. HAVE BEEN DESIGNED FOR TIP BEARING ONLY. THE REQUIRED TIP BEARING CAPACITY IS 1750 KPG.

DRILLED PIERS AT BENT NO.1 SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 44.5m AND SATISFY THE REQUIRED TIP BEARING CAPACITY. DRILLED PIERS AT BENT NO.2 AND NO.3 SHALL EXTEND TO AN ELEVATION NO HIGHER THAN 43m AND SATISFY THE REQUIRED TIP BEARING CAPACITY.

THE SCOUR CRITICAL ELEVATION FOR BENTS NO.1, NO.2, AND NO.3 IS ELEVATION 48.500m. THE SCOUR CRITICAL ELEVATIONS ARE FOR USE BY MAINTENANCE FORCES TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

THE CONTRACTOR SHALL OBSERVE A THREE MONTH WAITING PERIOD BEFORE BEGINNING ANY WORK FOR END BENT CONSTRUCTION AFTER COMPLETION OF THE EMBANKMENT AT EACH END BENT. NO OTHER WAITING PERIOD WILL BE REQUIRED FOR THE APPROACH SLAB CONSTRUCTION AT BOTH END BENTS.

PERMANENT STEEL CASING IS REQUIRED FOR DRILLED PIERS AT BENTS NO.1 AND NO.2 AND THE CASING SHALL NOT EXTEND BELOW ELEVATIONS 50.5m AND 50.0m, RESPECTIVELY. WITHOUT THE ENGINEER'S PERMISSION.

PERMANENT STEEL CASING IS NOT REQUIRED FOR DRILLED PIERS AT BENT NO.3.

FOR PERMANENT STEEL CASING, SEE SPECIAL PROVISION FOR DRILLED PIERS.

SPT TESTING IS NOT REQUIRED TO DETERMINE THE TIP BEARING CAPACITY OF THE DRILLED PIERS AT BENT NO.1, NO.2, OR NO.3.

SLURRY CONSTRUCTION SHALL NOT BE USED FOR THIS PROJECT.

SID INSPECTIONS ARE NOT REQUIRED TO DETERMINE THE BOTTOM CLEANLINESS OF THE DRILLED PIERS AT BENT NO.1, NO.2, AND NO.3.

THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH HEC 18, EVALUATING SCOUR AT BRIDGES, NOVEMBER, 1995.

THE CONTRACTOR SHALL PROVIDE INDEPENDENT ASSURANCE SAMPLES OF REINFORCING STEEL AS FOLLOWS: FOR PROJECTS REQUIRING UP TO 360,000 KG OF REINFORCING STEEL ONE 760mm SAMPLE OF EACH BAR USED, AND FOR PROJECTS REQUIRING OVER 360,000 KG. OF REINFORCING STEEL TWO 760mm SAMPLES OF EACH SIZE BAR USED. THE BARS FROM WHICH THE SAMPLES ARE TAKEN MUST THEN BE SPLICED WITH REPLACEMENT BARS OF THE SIZE AND LENGTH OF THE SAMPLE PLUS A MINIMUM LAP SPLICE OF THIRTY BAR DIAMETERS.

THE EXISTING STRUCTURE LOCATED AT THE SITE OF THE PROPOSED SOUTH BOUND LANE BRIDGE SHALL BE REMOVED. THE EXISTING STRUCTURE CONSISTS OF:

SUPERSTRUCTURE :

REINFORCED CONCRETE DECK ON 5 REINFORCED CONCRETE GIRDERS WITH A CLEAR ROADWAY WIDTH OF 7.866m AND 7 SPANS AT 15.240m EACH.

SUBSTRUCTURE :

REINFORCED CONCRETE POST AND BEAM END BENTS AND REINFORCED CONCRETE POST AND WEB PIER INTERIOR BENTS.

## TOTAL BILL OF MATERIAL

	REMOVAL OF EXISTING STRUCTURE	1370mm Ø DRILLED PIERS NOT IN ROCK	1370mm Ø DRILLED PIERS IN ROCK	1370mm Ø PERMANENT STEEL CASING	UNCLASSIFIED STRUCTURE EXCAVATION	REINFORCED CONCRETE DECK SLAB	GROOVING BRIDGE FLOORS	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL	SPIRAL COLUMN REINFORCING STEEL	1143mm PRESTRESSED CONCRETE GIRDERS	1372mm PRESTRESSED CONCRETE GIRDERS	HP 310 X 79 STEEL PILES	THREE BAR METAL RAIL	CONCRETE BARRIER RAIL	PLAIN RIP RAP CLASS II (600mm THICK)	FILTER FABRIC FOR DRAINAGE	ELASTOMERIC BEARINGS	EVAZOTE JOINT SEALS	ELECTRICAL CONDUIT SYSTEM	TEMPORARY ROCK CAUSEWAY	
	LUMP SUM	METERS	METERS	METERS	CU. METERS	SO. METERS	SO. METERS	CU. METERS	LUMP SUM	kg	kg	No.	METERS	No.	METERS	METERS	METERS	METRIC TONS	SO. METERS	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM
SUPERSTRUCTURE	LUMP SUM					1298.6	998.4		LUMP SUM			10	171.750	10	276.850		88.054	90.364		LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM
END BENT 1					360			28.1		2605				13	97.5			176	176				
BENT 1		26.0	3.4	11.4				37.4		7587	1961							225	225				
BENT 2		30.6	3.3	12.9				39.8		8229	2164												
BENT 3		36.0	3.3					28.9		8021	2253												
END BENT 2								25.7		2406				10	145.0			231	231				
TOTAL	LUMP SUM	92.6	10.0	24.3	360	1298.6	998.4	159.9	LUMP SUM	28848	6378	10	171.750	10	276.850	23	242.5	88.054	90.364	632	632	LUMP SUM	LUMP SUM

DRAWN BY : \_\_\_\_\_ DATE : \_\_\_\_\_  
CHECKED BY : \_\_\_\_\_ DATE : \_\_\_\_\_

PROJECT No. EXAMPLE  
\_\_\_\_\_ COUNTY  
STATION: \_\_\_\_\_  
SHEET 3 OF 3

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
HAZTID  
GENERAL DRAWING  
(SBL)  
BRIDGE OVER NEUSE RIVER  
ON US-401 BETWEEN  
SR 2006 AND SR 2224

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			3			
2			4			